

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A pixel interpolation circuit for generating interpolation pixel data which interpolates an input image based on pixel data composing the input image, the pixel interpolation circuit comprising:

a plurality of interpolation circuits, each interpolation circuit independently calculating, using a different interpolation method interpolation candidate data of the same unknown interpolation pixel for each unknown interpolation pixel and test interpolation data of a plurality of normal pixels neighboring the unknown interpolation pixel, wherein said test interpolation data is calculated for each of said normal pixels for each of said plurality of interpolation circuits on the assumption that said normal pixels is lost;

a determining circuit for selecting one of the interpolation circuits which most accurately reflects the pixel values of the normal pixels based on a difference between the test interpolation data and actual pixel data of said plurality of normal pixels, which is to be used to obtain the interpolation pixel data for each unknown interpolation pixel; and

an output circuit for outputting the interpolation candidate data calculated by the selected interpolation circuit as the interpolation pixel data for the unknown interpolation pixel.

2. (Original) A pixel interpolation circuit according to claim 1, wherein the determining circuit calculates a evaluation data for each of the interpolation circuits, by summing up the absolute values of the difference between the test interpolation data and the actual pixel data, and selects one of the interpolation circuits based on the evaluation data.

3. (Original) A pixel interpolation circuit according to claim 1, wherein the determining circuit calculates binarized or ternarized values of the difference between the test interpolation data and the actual pixel data.

4. (Currently Amended) A pixel interpolation method for generating interpolation pixel data which interpolates an input image based on pixel data composing the input image, the pixel interpolation method comprising:

calculating using a plurality of interpolation circuits, interpolation candidate data of an unknown interpolation pixel and test interpolation data of a plurality of normal pixels neighboring the unknown interpolation pixel independently by each of said plurality of interpolation circuits, where each of said plurality of interpolation circuits use a different interpolation method, wherein said test interpolation data is calculated for each of said normal pixels for each of said plurality of interpolation circuits on the assumption that said normal pixels is lost;

selecting one of the interpolation methods which most accurately reflects the pixel values of the normal pixels based on a difference between the test interpolation data and actual pixel data of said plurality of normal pixels which is to be used to obtain the interpolation pixel data for each unknown interpolation pixel; and

outputting the interpolation candidate data calculated by the selected interpolation method as the interpolation pixel data for the unknown interpolation pixel.

5. (Original) A pixel interpolation method according to claim 4 further comprising,

calculating a evaluation data for each of the interpolation methods, by summing up the absolute values of the difference between the test interpolation data and the actual pixel data, wherein the interpolation method is selected based on the evaluation data.

6. (Original) A pixel interpolation circuit according to claim 4 further comprising,

calculating binarized or ternarized values of the difference between the test interpolation data and the actual pixel data.

7. (Original) An image scanner comprising a pixel interpolation circuit according to claims 1.